Table WEB 1: DNOP General Toxicity, Rats

Species, Strain, and Source	Experimental Regimen	Animal Number	Dose*	Body Weight	Organ Weight	Histopathology	Hematology	Chemistry	Other
Sprague-Dawley Rat Poon et al. 1997 (*1*)	Young male and female rats were fed diets containing DNOP for 13 weeks, then killed and necropsied. A positive control group was exposed to DEHP.	10	0						
		10	0.40	NE	NE	NE	NE	NE	
		10	3.5(M)/4.1(F)	NE	NE	NE	NE	↑PO_4 (F)	
		10	36.8(M)/40.8(F)	NE	NE	NE	NE	NE	NOAEL
		10	350.1(M)/402.9(F)	NE	NE	Mild lesions in liver. Thyroid follicle reduction and decreased colloid density. No peroxisome proliferation or testicular lesions.	NE	↑EROD ↑ Ca (M)	
		10	*345(M)/411(F) DEHP*	*NE*	*-Li, Ki (M), ¯Te*	*Testicular atrophy, liver and thyroid lesions, and peroxisomal proliferation.*	*-WBC (F), PC . ¯Hb (F), MCV (F).*	*-Alb, PO_4, Ca (M), protein (F), APD, AH*	

*Doses measured in mg/kg bw/day.
NA=Not Analyzed
NE=No Effects
↑=Statistically Significant Increase
↓=Statistically Significant Decrease
WBC=White Blood Cell

M=Male
F=Female
Li=Liver
Ki=Kidney

Te=Testes
EROD=Ethoxyresorufin-O-deethylase
APD=Aminopyrine-N-Demethylase Activity
AH=Aniline Hydroxylase

Ca=Calcium
PC=Platelet Count
Hb=Hemoglobin
MCV=Mean Corpuscular Volume

Alb=Albumin
PO_4=Phosphate

WEB Table 2: DNOP Developmental Toxicity, Rats

Species, Strain, and Source	Experimental Regimen	Animal Number	Dose*	Maternal effects	Fetal Effects
Sprague-Dawley Rat Singh et al. 1972 (*2*)	Prenatal developmental toxicity study DNOP administered by intraperitoneal injection on gd 5, 10, and 15. Dams killed on gd 20, corpora lutea counted and implantation sites examined Fetuses weighed, examined for viability and gross external malformations. 30–50% of fetuses examined for skeletal malformations.	5 5 5	0 4,890 9,780	Not mentioned in paper.	↓ Fetal weight. ↑External malformations (16% fetuses with gross abnormalities). ↓ Fetal weight. ↑External malformations (27% fetuses with gross abnormalities).

*Doses measured in mg/kg bw/day.

↓=Statistically Significant Decrease

↑=Statistically Significant Increase

Table WEB-3: DnOP Reproductive Toxicity, Mice

Species, Strain, and Source	Experimental Regimen	Number[a]	Dose[b]	Effects
CD-1 Mice Heindel et al. 1989; Gulati et al. 1985 (*3*, *4*)	Dose range finding study. Fertility assessment through continuous breeding for 14 weeks. DNOP administered in feed. Body weight measured at 6 time points, clinical signs, and food and water intake recorded. Litters counted, sexed, weighed, observed for abnormalities, and removed following birth. Final litter raised; some control and high-dose F_1 weanlings mated for fertility assessment; F_1 organ weights measured at necropsy.	 36 20 18 20	0–10,000 0 1,800 3,600 7,500	Rough hair coat in high-dose group NE NE No adverse effects on sperm morphology, estrous cycles, or other reproductive parameters in F_1 rats. No effect on fertility index, mating index, numbers of litters produced, live pups/litter, sex ratio, or pup weight. ↓ Percent abnormal sperm in F_1 rats. ↓ Seminal vesicle to body weight ratio in F_1 rats. ↑ Liver and kidney (females) to body weight ratio in F_1 rats.

[a]Number of male and female pairs; half the number of controls used for F_1 study

[b]Author-calculated doses (in mg/kg bw/day) based on male mice.

NE=No Effect

↑=Statistically Significant Increase

↓=Statistically Significant Decrease

References

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4. Gulati DK, Chambers R, Shaver S, Sabehrwal PS, Lamb JC. Di-n-octyl phthalate reproductive and fertility assessment in CD-1 mice when administered in feed. Research Triangle Park: National Toxicology Program, 1985.